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## SEQUENCE LISTING

<110> Commonwealth Scientific and Industrial Research Organisation  
 <120> Genes involved in plant fibre development  
 <130> 503310  
 <150> AU 2004901749  
 <151> 2004-03-31  
 <150> US 60/558,480  
 <151> 2004-03-31  
 <160> 74  
 <170> PatentIn version 3.1  
 <210> 1  
 <211> 624  
 <212> PRT  
 <213> Gossypium hirsutum  
 <400> 1

Val Lys Phe Trp Phe Gln Asn Lys Arg Thr Gln Met Lys Ala Gln His  
 1 5 10 15

Glu Arg His Glu Asn Ala Ile Leu Lys Ala Glu Asn Glu Lys Leu Arg  
 20 25 30

Ala Glu Asn Asn Arg Tyr Lys Glu Ala Leu Ser Asn Ala Thr Cys Pro  
 35 40 45

Ser Cys Gly Gly Pro Ala Ala Leu Gly Glu Met Ser Phe Asp Glu Gln  
 50 55 60

His Leu Arg Ile Glu Asn Ala Arg Leu Arg Glu Glu Ile Asp Arg Ile  
 65 70 75 80

Ser Gly Ile Ala Ala Lys Tyr Val Gly Lys Pro Leu Ser Ser Leu Pro  
 85 90 95

His Leu Ser Ser His Leu His Ser Arg Ser Ala Asp Leu Gly Ala Ser  
 100 105 110

Asn Phe Gly Asn Gln Ser Gly Phe Val Gly Glu Met Asp Arg Ser Gly  
 115 120 125

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Asp	Leu	Leu	Arg	Ser	Val	Ser	Gly	Pro	Thr	Glu	Ala	Asp	Lys	Pro	Met
130						135					140				
Ile	Val	Glu	Leu	Ala	Val	Ala	Ala	Met	Glu	Glu	Leu	Ile	Arg	Met	Ala
145					150					155					160
Gln	Ser	Gly	Glu	Pro	Leu	Trp	Val	Pro	Gly	Asp	Asn	Ser	Thr	Asp	Val
				165					170					175	
Leu	Asn	Glu	Asp	Glu	Tyr	Leu	Arg	Thr	Phe	Pro	Arg	Gly	Ile	Gly	Pro
			180					185					190		
Lys	Pro	Leu	Gly	Leu	Arg	Ser	Glu	Ala	Ser	Arg	Glu	Ser	Ala	Val	Val
		195					200					205			
Ile	Met	Asn	His	Val	Asn	Leu	Val	Glu	Ile	Leu	Met	Asp	Val	Asn	Gln
	210					215					220				
Trp	Ser	Ser	Val	Phe	Cys	Gly	Ile	Val	Ser	Arg	Ala	Met	Thr	Leu	Glu
225					230					235					240
Val	Leu	Ser	Thr	Gly	Val	Ala	Gly	Asn	Tyr	Asn	Gly	Ala	Leu	Gln	Val
				245					250					255	
Met	Thr	Ala	Glu	Phe	Gln	Val	Pro	Ser	Pro	Leu	Val	Pro	Thr	Arg	Glu
			260					265					270		
Asn	Tyr	Phe	Ala	Arg	Tyr	Cys	Lys	Gln	His	Ile	Asp	Gly	Thr	Trp	Ala
		275					280					285			
Val	Val	Asp	Val	Ser	Leu	Asp	Asn	Leu	Arg	Pro	Asn	Pro	Met	Ser	Ser
	290					295					300				
Val	Glu	Arg	Pro	Ser	Gly	Cys	Leu	Ile	Gln	Asn	Cys	Gln	Met	Asp	Thr
305					310					315					320
Ser	Lys	Val	Ile	Trp	Val	Glu	His	Val	Glu	Val	Asp	Asp	Arg	Ala	Val
				325					330					335	
His	Asn	Ile	Tyr	Arg	Pro	Val	Val	Asn	Ser	Gly	Leu	Ala	Phe	Gly	Ala
			340					345					350		
Lys	Arg	Trp	Val	Ala	Thr	Leu	Asp	Arg	Gln	Cys	Glu	Arg	Leu	Ala	Ser

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355	360	365
Ser Met Ala Ser Asn Ile Pro Ala Gly Gly Leu Cys Val Ile Thr Ser 370 375 380		
Pro Glu Gly Arg Lys Ser Met Leu Lys Leu Ala Glu Arg Met Val Thr 385 390 395 400		
Ser Phe Cys Thr Gly Val Gly Ala Ser Thr Ala His Ala Trp Thr Thr 405 410 415		
Leu Ser Ala Thr Gly Ser Asp Asp Val Arg Val Met Thr Arg Lys Ser 420 425 430		
Met Asp Asp Pro Gly Arg Pro Pro Gly Ile Val Leu Ser Ala Ala Thr 435 440 445		
Ser Phe Trp Ile Gln Val Pro Pro Lys Arg Val Phe Asp Phe Leu Arg 450 455 460		
Asp Glu Asn Ser Arg Ser Glu Trp Asp Ile Leu Ser Asn Gly Gly Leu 465 470 475 480		
Val Gln Glu Met Ala His Ile Ala Asn Gly Arg Asp Pro Gly Asn Cys 485 490 495		
Val Ser Leu Leu Arg Val Asn Ser Ala Asn Ser Ser Gln Ser Asn Met 500 505 510		
Leu Ile Leu Gln Glu Ser Cys Thr Asp Ala Lys Gly Ser Tyr Val Ile 515 520 525		
Tyr Ala Pro Val Asn Ile Val Ala Met Asn Ile Val Leu Ser Gly Gly 530 535 540		
Asp Pro Asp Tyr Val Ala Leu Leu Pro Ser Gly Phe Ala Ile Leu Pro 545 550 555 560		
Asp Gly Pro Gly Val Asn Gly Gly Gly Ile Leu Glu Ile Gly Ser Gly 565 570 575		
Gly Ser Leu Leu Thr Val Ala Phe Gln Ile Leu Val Asp Ser Val Pro 580 585 590		

Thr Ala Lys Leu Ser Leu Gly Ser Val Ala Thr Val Asn Ser Leu Ile  
595 600 605

Lys Cys Thr Val Glu Arg Ile Lys Ala Ala Val Lys Cys Asn Asn Ala  
610 615 620

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<210> 2
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<213> Gossypium hirsutum
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Met Gly Arg Ser Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro  
1 5 10 15

Trp Thr Pro Glu Glu Asp Gln Lys Leu Leu Ala Tyr Ile Glu Gln His  
20 25 30

Gly His Gly Ser Trp Arg Ala Leu Pro Ser Lys Ala Gly Leu Gln Arg  
35 40 45

Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
50 55 60

Ile Lys Arg Gly Lys Phe Ser Leu Gln Glu Glu Gln Thr Ile Ile Gln  
65 70 75 80

Leu His Ala Leu Leu Gly Asn Arg Trp Ser Ala Ile Ala Thr His Leu  
85 90 95

Pro Lys Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu  
100 105 110

Met Lys Arg Leu Thr Lys Met Gly Ile Asp Pro Val Thr His Lys Pro  
115 120 125

Lys Thr Asp Ala Leu Gly Ser Thr Thr Gly Asn Pro Lys Asp Ala Ala  
130 135 140

Asn Leu Ser His Met Ala Gln Trp Glu Ser Ala Arg Leu Glu Ala Glu  
145 150 155 160

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Ala Arg Leu Val Arg Glu Ser Lys Leu Val Pro Ser Asn Pro Pro Gln  
 165 170 175

Ser Asn His Phe Thr Ala Val Ala Pro Ser Pro Thr Pro Ala Thr Arg  
 180 185 190

Pro Gln Cys Leu Asp Val Leu Lys Ala Trp Gln Gly Val Val Cys Gly  
 195 200 205

Leu Phe Thr Phe Asn Met Asp Asn Asn Asn Leu Gln Ser Pro Thr Ser  
 210 215 220

Thr Leu Asn Phe Met Glu Asn Thr Thr Thr Leu Pro Met Ser Ser Ser  
 225 230 235 240

Ser Ser Val Asn Gly Met Phe Asn Glu Asn Phe Gly Trp Asn Ser Ser  
 245 250 255

Ile Asn Pro Cys Glu Ser Gly Asp Asn Leu Lys Val Glu Tyr Gly Ser  
 260 265 270

Asp Gln Ile Pro Glu Leu Lys Glu Arg Leu Asp His Pro Met Glu Leu  
 275 280 285

His Glu Met Asp Tyr Ser Ser Glu Gly Thr Trp Phe Gln Glu Leu Phe  
 290 295 300

Gly Phe Asn Gly Leu  
 305

<210> 3  
 <211> 150  
 <212> PRT  
 <213> Gossypium hirsutum

<400> 3

Arg Cys Glu Arg Leu Leu Leu Cys Val Ile Ser Asp Ala Arg Ser Ile  
 1 5 10 15

His Tyr Leu Pro Ser Val Leu Ala Thr Ala Thr Met Met His Val Ile  
 20 25 30

Asp Gln Val Glu Leu Phe Asn Pro Ile Asp Tyr Gln Asn Gln Leu Leu

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35                                      40                                      45  
 Ser Val Leu Lys Ile Ser Lys Glu Lys Val Asn Asp Cys Tyr Lys Leu  
     50                                      55                                      60  
 Ile Leu Asp Val Ser Thr Arg Pro Gln Ala Gln Gly Asn Gly Gly Ala  
     65                                      70                                      75                                      80  
 Cys Lys Arg Lys Val Glu Glu Arg Val Pro Ser Ser Pro Ser Gly Val  
                                     85                                      90                                      95  
 Ile Asp Ala Ala Phe Gly Ser Asp Ser Ser Ser Asp Ser Trp Gly Thr  
                                     100                                      105                                      110  
 Val Ser Leu Ser Pro Glu Gln Gln Pro Pro Phe Lys Lys Ser Arg Ala  
                                     115                                      120                                      125  
 Gln Glu Gln Val Met Arg Leu Pro Ser Leu Asn Arg Val Phe Val Asp  
     130                                      135                                      140  
 Ile Val Gly Ser Pro Ser  
     145                                      150  
  
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 <213> Gossypium hirsutum  
  
 <400> 4  
 Met Ala Asn His Thr Val Thr Phe Leu Pro Lys Leu Ser Ile Glu Ala  
     1                                      5                                      10                                      15  
 Ile Gln Thr Val Thr Pro Met Arg Ile Thr Glu Pro Arg Gln Thr Arg  
                                     20                                      25                                      30  
 Gln Val Leu Ala Gly Glu Leu Val Gly Pro Gly Ile Phe Gln Arg Cys  
     35                                      40                                      45  
 Leu Asn Val Val Gln Tyr Tyr Met Lys Glu Lys Glu Glu Asp Ser Gly  
     50                                      55                                      60  
 Trp Leu Leu Ala Gly Trp Ile Lys Glu Thr Leu Gly Arg Ala Leu His  
     65                                      70                                      75                                      80

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Glu Gln Pro Met Ile Ser Gly Arg Leu Arg Lys Gly Glu Arg Asn Asp  
                   85                                  90                                  95

Gly Glu Leu Glu Ile Val Ser Asn Asp Cys Gly Ile Arg Leu Ile Glu  
                   100                                  105                                  110

Ala Arg Ile Gln Met Asn Leu Ser Asp Phe Leu Asp Leu Lys Gln Arg  
                   115                                  120                                  125

Glu Asp Ala Glu Ala Gln Leu Val Phe Trp Lys Asp Ile Asp Glu Gln  
                   130                                  135                                  140

Asn Pro Gln Phe Ser Pro Leu Phe Tyr Val Gln Val Thr Asn Phe Gln  
                   145                                  150                                  155                                  160

Cys Gly Gly Tyr Ser Ile Gly Ile Ser Cys Ser Ile Leu Leu Ala Asp  
                   165                                  170                                  175

Leu Leu Leu Met Lys Glu Phe Leu Lys Thr Trp Ala Asp Ile Pro Thr  
                   180                                  185                                  190

Arg Leu Leu Ser Thr Lys Thr Met Asn Lys Ser Phe Leu Tyr Ser Thr  
                   195                                  200                                  205

Phe Leu Ala Glu Lys His Gln Trp Cys Leu Pro Thr Ser Ser His Gln  
                   210                                  215                                  220

Ile Gln Ala Lys Leu  
                   225

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 <212> PRT  
 <213> Gossypium hirsutum

<400> 5

Met Ala Lys Tyr Leu Asn Val Val Leu Val Leu Ala Leu Val Val Val  
                   1                                  5                                  10                                  15

Gln Ala Thr Ala Arg Asn Val Pro Ser Asp Ala Ala Gly Leu Asn Asp  
                   20                                  25                                  30

Gln Lys Asn Leu Leu Thr Tyr Gly Gly Ile Gly Gly Tyr Ser Gly Met

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35                                      40                                      45  
 Gly Ser Asn Gly Met Pro Met Gly Gly Val Gly Ser Val Gly Gly Met  
     50                                      55                                      60  
 Thr Gly Leu Gly Gly Thr Gly Gly Met Gly Ala Met Val Gly Val Gly  
     65                                      70                                      75                                      80  
 Tyr Gly Gly Gly Pro Gly Ala Gly Gly Gly Asn Glu Gly Gly Val Gly  
                                     85                                      90                                      95  
 Ile Gly Asn Ala Pro Gly Val Val His Phe Pro  
                                     100                                      105  
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 <212> PRT  
 <213> Gossypium hirsutum  
 <400> 6  
 Ser Ser Asp Ser Arg Lys Pro Leu Ala Ser Phe Tyr Leu Glu Lys Thr  
     1                                      5                                      10                                      15  
 Lys Lys Leu Leu Leu Cys Trp Thr Cys Ser Cys Phe Phe Ser Leu Tyr  
                                     20                                      25                                      30  
 Gly Val Val Tyr Gly Leu Tyr Tyr Glu Phe Tyr Met Asn Arg Thr Leu  
                                     35                                      40                                      45  
 Asn Leu Val Arg Lys Leu Arg Met Ser Leu Gly Gly Ala Glu Val Leu  
     50                                      55                                      60  
 Met Ala Ile Ala Gly Leu Trp Ala Val Val Leu Arg Pro Leu Met Ile  
     65                                      70                                      75                                      80  
 Arg Tyr Ala Val Glu Met Ser Gln Met Ile Gly Ile Ser Val Arg Arg  
                                     85                                      90                                      95  
 Phe Phe Ser Asn Pro Leu Ser Pro Ser Val Ser Phe Phe Tyr Trp Tyr  
                                     100                                      105                                      110  
 <210> 7  
 <211> 258  
 <212> PRT



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&lt;213&gt; Gossypium hirsutum

&lt;400&gt; 7

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Met Ala Thr Lys Thr Met Met Leu Gln Ile Phe Pro Leu Phe Phe Phe
1          5          10          15

Leu Phe Ser Val Cys Asn Ser Ile Phe Leu Gly Ala Asn Gly Asp Asp
          20          25          30

Asn Gly Gly Trp Gln Thr Ala His Ala Thr Phe Tyr Gly Gly Ala Asp
          35          40          45

Ala Thr Gly Thr Met Gly Gly Ala Cys Gly Tyr Gly Asn Leu Tyr Ser
          50          55          60

Gln Gly Tyr Gly Thr Ser Thr Ala Ala Leu Ser Thr Ala Leu Phe Asn
65          70          75          80

Asn Gly Leu Ser Cys Gly Ala Cys Tyr Glu Leu Arg Cys Asn Asn Asp
          85          90          95

Pro Gln Trp Cys Ile Ser Arg Thr Ile Thr Val Thr Ala Thr Asn Phe
          100          105          110

Cys Pro Pro Asn Tyr Ala Leu Ser Ser Asp Asn Gly Gly Trp Cys Asn
          115          120          125

Pro Pro Arg Glu His Phe Asp Leu Ala Glu Pro Arg Phe Leu Arg Ile
          130          135          140

Ala Glu Tyr Arg Ala Gly Ile Val Pro Val Met Phe Arg Arg Val Ser
145          150          155          160

Cys Val Lys Lys Gly Gly Ile Arg Tyr Thr Met Asn Gly His Ser Tyr
          165          170          175

Phe Asn Met Val Leu Ile Thr Lys Leu Gly Gly Ala Gly Asp Ile Thr
          180          185          190

Ser Val Ser Ile Lys Gly Ser Arg Thr Gly Trp Leu Pro Met Ser Arg
          195          200          205

Asn Trp Gly Gln Asn Trp Gln Ser Asn Ala Tyr Leu Asn Gly Gln Ser

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210                                      215                                      220  
 Leu Ser Phe Lys Val Thr Ala Ser Asp Gly Arg Thr Ile Thr Ala Tyr  
 225                                      230                                      235                                      240  
 Asn Val Val Pro Ala Gly Trp Gln Phe Gly Gln Thr Phe Glu Gly Gly  
                                     245                                      250                                      255  
  
 Gln Phe  
  
 <210> 8  
 <211> 190  
 <212> PRT  
 <213> Gossypium hirsutum  
  
 <400> 8  
 Val Pro Phe Tyr Ser Ser Asn Tyr Leu Leu His Glu Ser Cys Met Met  
 1                                      5                                      10                                      15  
 Met Ile Ala Ser Leu Val Pro Asn Phe Met Met Gly Val Ile Ile Gly  
                                     20                                      25                                      30  
 Ala Gly Tyr Ile Gly Leu Leu Met Met Thr Ala Gly Tyr Phe Arg Leu  
                                     35                                      40                                      45  
 Leu Pro Asp Leu Pro Lys Ile Phe Trp Arg Tyr Pro Val Ser Tyr Ile  
                                     50                                      55                                      60  
 Asn Tyr Gly Ala Trp Ala Leu Gln Gly Ala Tyr Lys Asn Asp Met Val  
 65                                      70                                      75                                      80  
 Gly Leu Glu Phe Asp Gly Phe Ile Pro Gly Gly Pro Lys Leu Lys Gly  
                                     85                                      90                                      95  
 Asp Val Val Leu Thr Ser Met Leu Gly Ile His Leu Asp His Ser Lys  
                                     100                                      105                                      110  
 Trp Trp Asp Leu Ala Ala Val Ile Met Ile Leu Ile Ala Tyr Arg Leu  
                                     115                                      120                                      125  
 Leu Phe Phe Ile Ile Leu Lys Phe Lys Glu Arg Val Ser Pro Leu Phe  
                                     130                                      135                                      140

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Arg Thr Leu Tyr Thr Trp Arg Thr Leu Gln His Met Lys Lys Arg Pro  
 145 150 155 160

Ser Phe Arg Lys Thr Ser Ala Phe Pro Ser Lys Arg His Gln Val Leu  
 165 170 175

His Ser Leu Ser Ser Gln Glu Gly Leu Asn Ser Pro Ile His  
 180 185 190

<210> 9  
 <211> 805  
 <212> PRT  
 <213> Gossypium hirsutum

<400> 9

Met Ala Asn Pro Val Ile Thr Arg Val His Ser Leu Arg Glu Arg Leu  
 1 5 10 15

Asp Glu Thr Leu Leu Ala His Arg Asn Glu Ile Leu Ala Leu Leu Ser  
 20 25 30

Arg Ile Glu Gly Lys Gly Lys Gly Ile Leu Gln His His Gln Ile Ile  
 35 40 45

Leu Glu Phe Glu Ala Ile Pro Glu Glu Asn Arg Lys Lys Leu Ala Asp  
 50 55 60

Gly Ala Phe Phe Glu Val Leu Lys Ala Ser Gln Glu Ala Ile Val Leu  
 65 70 75 80

Pro Pro Trp Val Ala Leu Ala Val Arg Pro Arg Pro Gly Val Trp Glu  
 85 90 95

Tyr Ile Arg Val Asn Val His Ala Leu Val Val Glu Glu Leu Thr Val  
 100 105 110

Ala Glu Tyr Leu His Phe Lys Glu Glu Leu Val Asp Gly Ser Ser Asn  
 115 120 125

Gly Asn Phe Val Leu Glu Leu Asp Phe Glu Pro Phe Asn Ser Ser Phe  
 130 135 140

Pro Arg Pro Thr Leu Ser Lys Ser Val Gly Asn Gly Val Glu Phe Leu

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145		150		155		160
Asn Arg His Leu Ser	Ala Lys Leu Phe His	Asp Lys Glu Ser Met His				
	165	170			175	
Pro Leu Leu Glu Phe Leu Arg Val His Cys His Lys Gly Lys Asn Met						
	180	185			190	
Met Leu Asn Asp Arg Ile Gln Asn Leu Asn Ala Leu Gln His Val Leu						
	195	200			205	
Arg Lys Ala Glu Glu Tyr Leu Gly Thr Leu Pro Pro Glu Thr Pro Cys						
	210	215			220	
Ala Gly Phe Glu His Arg Phe Gln Glu Ile Gly Leu Glu Arg Gly Trp						
	225	230			235	240
Gly Asp Thr Ala Gln Arg Val Leu Glu Met Ile Gln Leu Leu Leu Asp						
	245	250				255
Leu Leu Glu Ala Pro Asp Pro Cys Thr Leu Glu Lys Phe Leu Gly Arg						
	260	265				270
Ile Pro Met Val Phe Asn Val Val Ile Leu Thr Pro His Gly Tyr Phe						
	275	280				285
Ala Gln Asp Asn Val Leu Gly Tyr Pro Asp Thr Gly Gly Gln Val Val						
	290	295			300	
Tyr Ile Leu Asp Gln Val Arg Ala Leu Glu Asn Glu Met Leu Leu Arg						
	305	310			315	320
Ile Lys Gln Gln Gly Leu Asn Ile Thr Pro Arg Ile Leu Ile Ile Thr						
	325	330				335
Arg Leu Leu Pro Asp Ala Val Gly Thr Thr Cys Gly Gln Arg Leu Glu						
	340	345				350
Lys Val Tyr Gly Thr Glu Tyr Ser Asp Ile Leu Arg Val Pro Phe Arg						
	355	360				365
Thr Glu Lys Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp						
	370	375			380	

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Pro Tyr Leu Glu Thr Tyr Thr Glu Asp Val Ala His Glu Ile Ser Lys  
 385 390 395 400

Glu Leu Gln Gly Lys Pro Asp Leu Ile Ile Gly Asn Tyr Ser Asp Gly  
 405 410 415

Asn Ile Val Ala Ser Leu Leu Ala His Lys Leu Gly Val Thr Gln Cys  
 420 425 430

Thr Ile Ala His Ala Leu Glu Lys Thr Lys Tyr Pro Asp Ser Asp Ile  
 435 440 445

Tyr Trp Lys Lys Leu Glu Asp Lys Tyr His Phe Ser Cys Gln Phe Thr  
 450 455 460

Ala Asp Leu Phe Ala Met Asn His Thr Asp Phe Ile Ile Thr Ser Thr  
 465 470 475 480

Phe Gln Glu Ile Ala Gly Ser Lys Asp Thr Val Gly Gln Tyr Glu Ser  
 485 490 495

His Thr Ala Phe Thr Leu Pro Gly Leu Tyr Arg Val Val His Gly Ile  
 500 505 510

Asp Val Phe Asp Pro Lys Phe Asn Ile Val Ser Pro Gly Ala Asp Met  
 515 520 525

Glu Ile Tyr Phe Pro Tyr Thr Glu Glu Lys Arg Arg Leu Lys His Phe  
 530 535 540

His Thr Glu Ile Glu Asp Leu Leu Tyr Ser Lys Val Glu Asn Glu Glu  
 545 550 555 560

His Leu Cys Val Leu Asn Asp Arg Asn Lys Pro Ile Leu Phe Thr Met  
 565 570 575

Ala Arg Leu Asp Arg Val Lys Asn Leu Thr Gly Leu Val Glu Trp Tyr  
 580 585 590

Gly Lys Asn Ala Lys Leu Arg Glu Leu Ala Asn Leu Val Val Val Gly  
 595 600 605

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Gly Asp Arg Arg Lys Glu Ser Lys Asp Leu Glu Glu Lys Ala Glu Met  
610 615 620

Lys Lys Met Phe Glu Leu Ile Glu Lys Tyr Asn Leu Asn Gly Gln Phe  
625 630 635 640

Arg Trp Ile Ser Ser Gln Met Asn Arg Ile Arg Asn Gly Glu Leu Tyr  
645 650 655

Arg Tyr Ile Cys Asp Thr Lys Gly Ala Phe Val Gln Pro Ala Leu Tyr  
660 665 670

Glu Ala Phe Gly Leu Thr Val Val Glu Ala Met Thr Cys Gly Leu Pro  
675 680 685

Thr Phe Ala Thr Cys Asn Gly Gly Pro Ala Glu Ile Ile Val His Gly  
690 695 700

Lys Ser Gly Phe Asn Ile Asp Pro Tyr His Gly Asp Gln Ala Ala Asp  
705 710 715 720

Ile Leu Val Asp Phe Phe Glu Lys Cys Lys Lys Asp Pro Ser His Trp  
725 730 735

Asp Lys Ile Ser Gln Gly Gly Leu Lys Arg Ile Glu Glu Lys Tyr Thr  
740 745 750

Trp Lys Ile Tyr Ser Glu Arg Leu Leu Thr Leu Thr Gly Val Tyr Gly  
755 760 765

Phe Trp Lys His Val Ser Asn Leu Glu Arg Arg Glu Ser Arg Arg Tyr  
770 775 780

Leu Glu Met Phe Tyr Ala Leu Lys Tyr Arg Lys Leu Ala Glu Ser Val  
785 790 795 800

Pro Leu Ala Glu Glu  
805

<210> 10  
<211> 195  
<212> PRT  
<213> Gossypium hirsutum

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&lt;400&gt; 10

Met Glu Arg Gly Phe Ile Val Leu Ala Leu Thr Val Val Phe Ala Ala  
 1 5 10 15

Thr Val Val Thr Ala Ala Asp Glu Ser Gly Leu Ala Asn Glu Cys Ser  
 20 25 30

Lys Asp Phe Gln Ser Val Met Thr Cys Leu Ser Phe Ala Gln Gly Lys  
 35 40 45

Ala Ala Ser Pro Ser Lys Glu Cys Cys Asn Ser Val Ala Gly Ile Lys  
 50 55 60

Glu Asn Lys Pro Lys Cys Leu Cys Tyr Ile Leu Gln Gln Thr Gln Thr  
 65 70 75 80

Ser Gly Ala Gln Asn Leu Lys Ser Leu Gly Val Gln Glu Asp Lys Leu  
 85 90 95

Phe Gln Leu Pro Ser Ala Cys Gln Leu Lys Asn Ala Ser Val Ser Asp  
 100 105 110

Cys Pro Lys Leu Leu Gly Leu Ser Pro Ser Ser Pro Asp Ala Ala Ile  
 115 120 125

Phe Thr Asn Ser Ser Ser Lys Ala Thr Thr Pro Ser Thr Ser Thr Thr  
 130 135 140

Thr Ala Thr Pro Ser Ser Ala Ala Asp Lys Thr Asp Ser Lys Ser Ser  
 145 150 155 160

Gly Ile Lys Leu Gly Pro His Phe Val Gly Ser Thr Ala Ala Leu Leu  
 165 170 175

Val Ala Thr Ala Ala Val Phe Phe Leu Val Phe Pro Ala Gly Phe Ala  
 180 185 190

Ser Ile Val  
 195

&lt;210&gt; 11

&lt;211&gt; 123

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&lt;212&gt; PRT

&lt;213&gt; Gossypium hirsutum

&lt;400&gt; 11

Met Ala Ser Ser Gly Val Leu Lys Leu Val Ser Met Ile Leu Met Val  
 1 5 10 15

Cys Met Thr Met Met Ser Ala Pro Lys Ala Ala Lys Ala Ala Ile Thr  
 20 25 30

Cys Ser Asp Val Val Asn His Leu Ile Pro Cys Leu Ser Tyr Val Gln  
 35 40 45

Asn Gly Gly Thr Pro Ala Ala Ala Cys Cys Ser Gly Val Lys Ala Leu  
 50 55 60

Tyr Gly Glu Val Gln Thr Ser Pro Asp Arg Gln Asn Val Cys Lys Cys  
 65 70 75 80

Ile Lys Ser Ala Val Asn Gly Ile Pro Tyr Thr Ser Asn Asn Leu Asn  
 85 90 95

Leu Ala Ala Gly Leu Pro Ala Lys Cys Gly Leu Gln Leu Pro Tyr Ser  
 100 105 110

Ile Ser Pro Ser Thr Asp Cys Asn Lys Val Gln  
 115 120

&lt;210&gt; 12

&lt;211&gt; 282

&lt;212&gt; PRT

&lt;213&gt; Gossypium hirsutum

&lt;400&gt; 12

Pro Arg Val Arg Pro Arg Val Arg Ala His Leu Pro Lys Arg Thr Asp  
 1 5 10 15

Asn Glu Ile Lys Asn Tyr Trp Asn Thr Gln Leu Lys Lys Arg Leu Thr  
 20 25 30

Thr Ile Gly Ile Asp Pro Ala Thr His Arg Pro Lys Thr Asp Thr Leu  
 35 40 45

Gly Ser Thr Pro Lys Asp Ala Ala Asn Leu Ser His Met Ala Gln Trp



50

60

Asn Ala Ser Pro Ser Gly Ser Ser Val Phe  
275 280

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<210> 13  
 <211> 177  
 <212> PRT  
 <213> *Gossypium hirsutum*

<400> 13

Met Lys Val Leu Ser Pro Ile Leu Ala Cys Leu Ala Leu Ala Val Val  
 1 5 10 15

Ala Ser His Ala Ala Leu Ser Pro Glu Gln Tyr Trp Ser Tyr Lys Leu  
 20 25 30

Pro Asn Thr Pro Met Pro Lys Ala Val Lys Glu Ile Leu His Pro Glu  
 35 40 45

Leu Met Glu Glu Lys Ser Thr Ser Val Asn Val Gly Gly Gly Gly Val  
 50 55 60

Asn Val Asn Thr Gly Lys Gly Lys Pro Ala Gly Gly Thr His Val Asn  
 65 70 75 80

Val Gly Arg Lys Gly Val Gly Val Asn Thr Gly Lys Pro Gly Gly Gly  
 85 90 95

Thr His Val Asn Val Gly Gly Lys Gly Val Gly Val Asn Thr Gly Lys  
 100 105 110

Pro Gly Gly Gly Thr His Val Asn Val Gly Gly Lys Gly Gly Gly Val  
 115 120 125

Ser Val His Thr Gly His Lys Gly Lys Pro Val Asn Val Asn Val Ser  
 130 135 140

Pro Phe Leu Tyr Gln Tyr Ala Ala Ser Glu Thr Gln Ile His Asp Asp  
 145 150 155 160

Pro Asn Val Ala Leu Phe Phe Leu Glu Lys Asp Leu His Pro Gly Gln  
 165 170 175

Gln

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<210> 14  
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 <213> Gossypium hirsutum

<400> 14

Leu Ser Glu Ser Lys Glu Met Val Phe Gln Phe Asn Phe Pro Val Leu  
 1 5 10 15

Leu Leu Cys Leu Met Phe Leu Met Cys Gly Arg Gly Asn Ala Val Arg  
 20 25 30

Asp Leu Glu Gly Lys His Asp Phe Glu Ser His Gly Arg Asp Asp Glu  
 35 40 45

Val Glu Ser Leu Asp Asp Lys Tyr Val Ser Ala Tyr Phe His Gln Thr  
 50 55 60

Phe Asp Ser Ala Asn His Phe Asp Gly Gly Asp Glu Val Lys Asn Leu  
 65 70 75 80

Glu Asp Lys Tyr Ser Thr Ala Tyr Phe His Lys Ser Leu Asp Ser Gly  
 85 90 95

Asn His Gly Arg Asp Asp Lys Ala Lys Ile Leu Glu Asp Lys Tyr Ala  
 100 105 110

Thr Ala Tyr Phe His Lys Thr Ser Val Phe Glu Asn His Gly Glu Gly  
 115 120 125

Asp Lys Leu Lys Ser Leu Glu Asp Lys Tyr Ser Ala Ala Tyr Phe His  
 130 135 140

Asn Thr Gln Ser Ser Lys Met Met Lys Asp His Asn Met Glu His His  
 145 150 155 160

His His Tyr His Asn His Val Glu Ser Ala Glu Ile Gly Leu Phe Thr  
 165 170 175

Ile Asp Glu Leu His Thr Phe Asn Val Gly Lys Lys Leu Pro Ile Phe  
 180 185 190

Phe Pro Ile Lys Asn His Ser Leu Tyr Pro Pro Leu Leu Pro Lys Gln  
 195 200 205

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Ile Ala Asp Thr Ile Pro Phe Ser Ser Phe Gln Val Ser Asn Ile Leu  
 210 215 220

Arg Phe Phe Ser Val Ser Pro Asp Ser Pro Lys Gly Lys Ser Cys Ser  
 225 230 235 240

Arg Tyr Leu Arg Lys Met Arg Thr Arg Ser Ser Ala Arg Gly Arg Pro  
 245 250 255

Lys Ile Trp Ala Thr Ser Leu Lys Ser Leu His Gly Phe Leu Ser Met  
 260 265 270

His Leu Gly Pro Met Leu Ile Ser Ser Ser  
 275 280

<210> 15  
 <211> 55  
 <212> PRT  
 <213> Gossypium hirsutum

<400> 15

Lys Trp Glu Ala Gly Gln Ser Gln Cys Met Val Val Leu Val Phe Thr  
 1 5 10 15

Gln Ile Ser Leu Val Lys Gly Lys Arg Lys Leu Cys Tyr Ser Ser Ile  
 20 25 30

Val Ala Leu Ile Leu Glu Ser Val Leu Phe Val Leu Thr Phe Pro Ala  
 35 40 45

Leu Thr Asp Met Asn Leu Tyr  
 50 55

<210> 16  
 <211> 235  
 <212> PRT  
 <213> Gossypium hirsutum

<400> 16

Met Pro Arg Thr Arg Arg Phe Asn Pro Pro Ser Ile Thr Ser Arg Thr  
 1 5 10 15

Leu Gly His His Val Tyr Lys Asp Asp Asn Pro Ile Val Tyr Gly Thr

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25

30

Met Gln Ala Tyr Leu Lys Asp Ala Arg Glu Arg Leu Phe Asn Thr Ala  
 35 40 45

Arg Thr Ala Glu Lys Leu Gly Ile His Met Gly Phe Lys Leu Val Arg  
 50 55 60

Gly Ala Tyr Met Ser Ser Glu Thr Lys Leu Ala Ser Ser Leu Gly Phe  
 65 70 75 80

Asp Ser Pro Val His Asn Thr Ile Gln Asp Thr His Ala Cys Phe Asn  
 85 90 95

Asp Cys Ala Ser Phe Met Ile Glu Lys Ile Ala Asp Gly Tyr Gly Gly  
 100 105 110

Leu Val Leu Ala Thr His Asn Leu Glu Ser Gly Lys Leu Ala Ala Ser  
 115 120 125

Lys Ala Arg Asn Leu Gly Ile Glu Lys Gly Asn Gln Lys Leu Glu Phe  
 130 135 140

Ala Gln Leu Tyr Gly Met Ser Glu Ala Leu Ser Ile Gly Leu Arg Asn  
 145 150 155 160

Ala Gly Phe Gln Val Ser Lys Tyr Leu Pro Tyr Gly Pro Val Asp Met  
 165 170 175

Val Met Pro Tyr Leu Leu Arg Arg Ala Glu Glu Asn Arg Gly Leu Leu  
 180 185 190

Ser Thr Ser Ser Leu Asp Arg Thr Leu Met Gly Lys Glu Leu Lys Arg  
 195 200 205

Arg Leu Lys Ser Leu Gln Phe Ala Lys Pro Glu Met Ala Ala Ser Ala  
 210 215 220

Ala Gly Ser Met Lys Ile Glu Ile Gly Thr Pro  
 225 230 235

<210> 17  
 <211> 2207

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&lt;212&gt; DNA

<213> *Gossypium hirsutum*

&lt;400&gt; 17

gtcaagttct ggttcacaaa caagcgcacc caaatgaagg cccaacatga acgccatgaa	60
aatgctatac tgaaggctga gaatgaaaaa ctccgagctg agaataatag gtacaaggaa	120
gctctcagca atgctacatg cccagctgt ggaggcccag ctgcccttgg agagatgtca	180
tttgatgagc aacatttgag aatagaaaat gctcggttaa gggaagagat tgataggata	240
tctggaatag ctgctaaata tgttggaag cctttatctt cattgcctca cctttcatct	300
catttacatt cgcgctctgc tgatcttga gctagcaatt tcgggaatca atcaggatctt	360
gtaggggaaa tggatcgcag tggatgactt ctgaggtctg tctctggacc tacagaagcg	420
gataagccca tgattgttga gcttgctgtt gctgcaatgg aggaactaat acgaatggcc	480
caatctgggg aacctttgtg ggttcctggg gacaattcta cagatgtgtt gaacgaagat	540
gaatacttaa gaactttccc taggggaatt ggaccaaagc ctttgggggtt gaggtctgaa	600
gcttcaagag aatctgcagt tgtcatcatg aatcatgtca acttagttga gattctcatg	660
gatgtgaatc aatggtcaag tgtgttttgc ggtattgttt caagggctat gactttagaa	720
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ttccaagtcc cttcaccact tgtaccaact cgggaaaatt atttcgcgag gtactgtaag	840
cagcatattg atggaacttg ggcagtgggt gatgtttcct tggataatct acgccctaac	900
ccaatgtcaa gtgtagagag gccctcaggt tgcttgatcc agaattgcca aatggatacc	960
tctaaggtta tatgggtcga gcatgtagaa gtggatgata gagctgtcca caacatatac	1020
agaccagtag ttaattccgg tctagctttt ggagcaaaac gttgggtggc tacgttggat	1080
cgacagtgtg agcgtctagc aagttcaatg gccagtaaca ttccagcagg ggggtctatgc	1140
gttataacaa gcccagaagg gaggaaaagt atgttgaagt tggcagagag gatggtgact	1200
agctttttgta caggtgttgg tgctttctac gcccatgctt ggacaacttt atcggcaaca	1260
ggctccgatg atgtgcgggt tatgaccga aagagcatgg atgatccagg aaggcctcct	1320
ggtattgtac ttagtgctgc aacttccttc tggatccaag ttccaccaa gagggtatctt	1380
gatttcctaa gggatgagaa ctctagaagt gagtgggata tcctatcaaa tgggtggccta	1440
gttcaagaaa tggctcacat agctaattgg cgtgatccag gcaatttgtt ctctttactc	1500
cgogtaaata gtgcaaactc tagccaaagc aacatgttga tacttcaaga gagctgcact	1560
gatgctaaag ggtcctacgt gatatatgcc ccggtcaata ttgttgcaat gaacatcgtc	1620

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ttaagtggcg gggacccgga ttatgtcgca ctattgccat ccggtttcgc aattcttccc 1680
gatgggccag gagttaatgg aggagggatc ctcgaaatcg gctcgggtgg ctctctcctt 1740
accgttgctt tccagatttt gggtgattca gttccacag caaagctttc tcttgatca 1800
gtggcgactg tcaacagtct aattaaatgc acggttgaaa ggatcaaggc tgccgtaaag 1860
tgcaataatg cttgaccaa catgatataa aaaaaggaaa cgagaagaaa aggtgtttgt 1920
ccgaaaacaa atttaacgat tgaagaagtc aagagcgcac ctttcaattc atcctttgcy 1980
gtcatgggtg tctgtaagaa ggcaaaatca tcaagcctgc aaggatagta gggtcgggaa 2040
ttgactttgc caacgagatt ctaatatag atatgttggg agaactcccc attttgtgta 2100
ggctaagagt tcaatgtagg agtggacttt atactagtct aatttctttc tggtttcatg 2160
tgttattgtt gaagcattag ttaatttgga cttattcctc cattaac 2207

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<210> 18
<211> 1872
<212> DNA
<213> Gossypium hirsutum

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<400> 18
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aatgctatac tgaaggctga gaatgaaaaa ctccgagctg agaataatag gtacaaggaa 120
gctctcagca atgctacatg cccagctgt ggaggccag ctgcccttg agagatgtca 180
tttgatgagc aacatttgag aatagaaaat gctcgggttaa gggaagagat tgataggata 240
tctggaatag ctgctaaata tgttggaag cctttatctt cattgcctca ctttcatct 300
catttacatt cgcgctctgc tgatcttgga gctagcaatt tcgggaatca atcaggattt 360
gtaggggaaa tggatcgag tggatgctt ctgaggtctg tctctggacc tacagaagcg 420
gataagccca tgattgttga gcttgctgtt gctgcaatgg aggaactaat acgaatggcc 480
caatctgggg aacctttgtg ggttcctggg gacaattcta cagatgtgtt gaacgaagat 540
gaatacttaa gaactttccc taggggaatt ggaccaaagc ctttgggggtt gaggtctgaa 600
gcttcaagag aatctgcagt tgtcatcatg aatcatgtca acttagttga gattctcatg 660
gatgtgaatc aatgggtcaag tgtgttttgc ggtattgttt caagggtat gactttagaa 720
gtcctatcaa ctggagttgc aggaaactac aatggggcct tgcaagtgat gacggctgag 780
ttccaagtcc cttcaccact tgtaccaact cgggaaaatt atttcgagag gtactgtaag 840
cagcatattg atggaacttg ggcagtgggt gatgtttcct tggataattt acgccctaac 900

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ccaatgtcaa gtgtagagag gccctcaggt tgcttgatcc agaattgcca aatggatacc 960
totaaggtta tatgggtcga gcatgtagaa gtggatgata gagctgtcca caacatatac 1020
agaccagtag ttaattccgg tctagctttt ggagcaaaac gttgggtggc tacgttggat 1080
cgacagtgtg agcgtctagc aagttcaatg gccagtaaca ttccagcagg ggggtctatgc 1140
gttataacaa gcccagaagg gaggaaaagt atgttgaagt tggcagagag gatggtgact 1200
agcttttgta caggtgttgg tgcttctacg gcccatgctt ggacaacttt atcggcaaca 1260
ggctccgatg atgtgcgggt tatgacccga aagagcatgg atgatccagg aaggcctcct 1320
ggatttgtac ttagtgctgc aacttccttc tggatccaag ttccaccaa gaggggtat 1380
gatttcctaa gggatgagaa ctctagaagt gagtgggata tcctatcaaa tgggtggccta 1440
gttcaagaaa tggctcacat agctaattgg cgtgatccag gcaattgtgt ctctttactc 1500
cgcgtaaata gtgcaaactc tagccaaagc aacatgttga tacttcaaga gagctgcact 1560
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gatgggccag gagttaatgg aggagggatc ctcgaaatcg gctcgggtgg ctctctcctt 1740
accgttgctt tccagat 1800
gtggcgactg tcaacagtct aattaaatgc acggttgaaa ggatcaaggc tgcoogtaaag 1860
tgcaataatg ct 1872

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<210> 19
<211> 1180
<212> DNA
<213> Gossypium hirsutum

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<400> 19
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tatatatatg gggagatcac catgttgtga aaaggtaggg ttgaagaaag gtccatggac 120
cccagaagaa gatcaaaagc tcttagctta cattgaacaa catggccatg gaagctggcg 180
tgcocttgct tcaaaagctg ggcttcaaag atgtggaaag agttgcagac tgagatggat 240
taactacttg agacctgata tcaaaagagg aaagttcagt ttacaagaag aacagaccat 300
tattcaactc catgcccttc ttggaaacag gtgggtctgcc atagctactc atttgccgaa 360
aagaacagac aatgagatca agaactactg gaacacacat ctaatgaaaa ggctaaccaa 420
aatggggatc gatcctgtca ccacaagcc taaaaccgat gcactcgggt ccaccactgg 480

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taaccctaaa gatgctgcta accttagtca catgggtcaa tgggagagtg ctcgtttaga 540
agctgaagct agactggttc gtgagtccaa gctagttcct tcaaaccctc ctcaaagcaa 600
ccatttcact gccgttgccg cttcgccgac tccggcaact agaccgcaat gcctcgacgt 660
actcaaagca tggcaagggtg tcgtctgcgg gttatttcaact ttcaacatgg acaataacaa 720
cttacagtcc cctacgtcaa cgttgaactt catggagaac accacaacat tgcccatgtc 780
atcatcatcg tctgttaatg gaatgtttta tgaaaacttt gggttggaact catcgattaa 840
tccatgtgaa agtggggata atttgaaagt tgaatatggc agtgatcaaa ttccagagtt 900
aaaggaaaga ttggatcatc caatggaatt gcatgaaatg gactattcct cagagggtac 960
atgggtttcaa gagttgtttg gatttaatgg tttatgattc tgcagaagga ttcatcaaag 1020
gaaagaaagc tatctggttt catctttgaa gttcacttaa gtgtaggatt tttattcaca 1080
agtgccttca catattacca ttaactgtaa taataaacct tcaaattaat aaattaaaaa 1140
actcacaagg gtttttggcc aaaaaaaaaa aaaaaaaaaa 1180

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<210> 20
<211> 927
<212> DNA
<213> Gossypium hirsutum

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<400> 20
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gaagatcaaa agctcttagc ttacattgaa caacatggcc atggaagctg gcgtgccttg 120
ccttcaaaaag ctgggcttca aagatgtgga aagagttgca gactgagatg gattaactac 180
ttgagacctg atatcaaaaag aggaaagtgc agtttacaag aagaacagac cattattcaa 240
ctccatgcc ttcttggaag caggtggtct gccatagcta ctcatctgcc gaaaagaaca 300
gacaatgaga tcaagaacta ctggaacaca catctaataa aaaggctaac caaatgggg 360
atcgatcctg taccacacaa gcctaaaacc gatgcaactg gctccaccac tggtaacct 420
aaagatgctg ctaaccttag tcacatggct caatgggaga gtgctcgttt agaagctgaa 480
gctagactgg ttcgtgagtc caagctagtt cttcaaacc ctctcaaaag caaccatttc 540
actgccgttg cgccttcgcc gactccggca actagaccgc aatgcctoga cgtactcaaa 600
gcatggcaag gtgtcgtctg cgggttattc actttcaaca tggacaataa caacttacag 660
tcccctacgt caacgttgaa cttcatggag aacaccacaa cattgcccac gtcacatca 720
tcgtctgtta atggaatgtt taatgaaaac tttggttgga actcatcgat taatccatgt 780

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gaaagtgggg ataatttgaa agttgaatat ggcagtgatc aaattccaga gttaaaggaa 840  
 agattggatc atccaatgga attgcatgaa atggactatt cttcagaggg tacatggttt 900  
 caagagttgt ttggatttaa tggttta 927

<210> 21  
 <211> 600  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 21  
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 cctctgtatt ggctactgca accatgatgc acgtcataga ccaagttgag cttttcaatc 120  
 ccattgacta ccaaaatcag ctgctgagtg ttcttaaaat tagcaaggaa aaagtaaacg 180  
 attgttaciaa gctcatcctt gatgtatcaa caagacccca ggccaaggc aatggtggtg 240  
 catgtaagag gaaggtggag gagaggggtc ctagcagccc tagtggagtg attgatgctg 300  
 catttggcag tgatagctcg agcgattctt ggggcacggt gtccttatcg cctgagcagc 360  
 agccaccttt taagaagagc agagcccaag agcaagtaat gcgtttgcc a tcaactcaacc 420  
 gagtctttgt agacattgtt ggcagccctt cttaattata tctcccttct ctctctccct 480  
 cgctctctcc atctctttct ttgtcccaa aagatctata ttattatgc ttatgttcac 540  
 ttttggttca aggaatcaaa tgttaagtta aaaaaatgaa aaaaacaaag taaaagctgc 600

<210> 22  
 <211> 452  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 22  
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 cctctgtatt ggctactgca accatgatgc acgtcataga ccaagttgag cttttcaatc 120  
 ccattgacta ccaaaatcag ctgctgagtg ttcttaaaat tagcaaggaa aaagtaaacg 180  
 attgttaciaa gctcatcctt gatgtatcaa caagacccca ggccaaggc aatggtggtg 240  
 catgtaagag gaaggtggag gagaggggtc ctagcagccc tagtggagtg attgatgctg 300  
 catttggcag tgatagctcg agcgattctt ggggcacggt gtccttatcg cctgagcagc 360  
 agccaccttt taagaagagc agagcccaag agcaagtaat gcgtttgcc a tcaactcaacc 420  
 gagtctttgt agacattgtt ggcagccctt ct 452

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<210> 23  
 <211> 704  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 23  
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 ggcaggggag cttgtaggac ccgggatttt ccaaaggtgt ttgaacgtgg tccagtacta 180  
 catgaaggag aaagaagaag actctggttg gttactggct gggatggatca aggaaacact 240  
 tgggagagct ttacatgagc aaccaatgat ttctggctgt cttcggaaag gggaacgaaa 300  
 cgatggagaa ttggagattg tttccaatga ctgcggcatt agactcattg aggcaaggat 360  
 tcagatgaat ctgtcggatt ttcttgattt gaaacaaagg gaagatgctg aagctcagct 420  
 tgttttctgg aaagatattg atgagcaaaa cccacagttc tccccactct tttatgttca 480  
 ggttactaat ttccagtgtg gtggatattc aattgggatt agctgcagta ttcttctggc 540  
 agatcttttg ttaatgaaag aattccttaa gacatgggca gatattccaa caagggttatt 600  
 atcaacaaaa acgatgaaca aaagcttctt ttattctacc ttcttggtg aaaaacacca 660  
 atggtgcctc cctacatcat cacatcaa at tcaagcaaaa ctca 704

<210> 24  
 <211> 548  
 <212> DNA  
 <213> *Gossypium hirsutum*

<220>  
 <221> misc\_feature  
 <222> (491)..(491)  
 <223> n = unknown

<400> 24  
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 tagcgatgct gctggtctca atgacaaaaa gaacctctc acatacgggtg gcattggcgg 180  
 ctactctggc atgggttcaa atggcatgcc aatgggtgga gttgggagtg ttggtggtat 240  
 gactggcctt ggtggtacag gtgggatggg cgccatggta ggtgttgggt atggaggtgg 300  
 gcctggcgct ggtggtggaa atgaaggtgg tgttggcatt ggcaatgcgc ctggtgtcgt 360  
 ccactttctt tgaactttgc tggatggtta aaattttaaa gcaactagtt tcttgaactt 420

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tgctggaggg gtttaaattt taaagcaact agtctaactt acgttaaaga ataatattaa 480  
 tgttgctcta nagtgtgaaa tgttgtcctg tgtatgggtt atgtgataag tccatcttta 540  
 tttttttt 548

<210> 25  
 <211> 321  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 25  
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 aggaatgtgc ctagcgatgc tgctggtctc aatgaccaaa agaacctcct cacatacggg 120  
 ggcattggcg gctactctgg catgggttca aatggcatgc caatgggtgg agttgggagt 180  
 gttggtggta tgactggcct tgggtggtaca ggtgggatgg gcgccatggg aggtgttggg 240  
 tatggaggtg ggcctggcgc tgggtggtgga aatgaaggtg gtgttggcat tggcaatgcg 300  
 cctggtgtcg tccactttcc t 321

<210> 26  
 <211> 727  
 <212> DNA  
 <213> *Gossypium hirsutum*

<220>  
 <221> misc\_feature  
 <222> (26)..(26)  
 <223> n = unknown

<400> 26  
 ccaaaatgta agtcttcaaa accaanagaa gaaactgtaa agcagtagta atgcaaatgc 60  
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 ttcatggtgt attttggtgc gtgtctgtta agaatccgag ttgttgtccc gtggtattag 180  
 cttctctgtc ttgctgggtg cgattgggca gttgtgacgt ctataatcaa gtgattcaag 240  
 gaaaccgtta gcttcatttt acttgagaaa gacaaagaag ctattgttgt gctggacttg 300  
 ttcttgcttt ttctctttgt atggtgtggt ttatggtttg tattatgagt tttatatgaa 360  
 tagaactttg aatttggtga gaaaattaag aatgagcttg ggaggagcag aagtgttgat 420  
 ggcaatagca gggttgtggg cagtggtttt gaggccattg atgataaggt atgccgtaga 480  
 gatgagtcaa atgattggaa tttccgttag gagatttttc agtaatcctc tttccccttc 540

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cgtatcgttt ttttattggt actgatatag aaattctatg aaatgagcac aatatgagac 600  
 accatTTTT gctagccaag aagtttagatg agtagtagac tttggtttaa gcttatcata 660  
 attgaaattg ttagactgta acccttttgt ctcctttctc taatttcaaa tccaaattcc 720  
 catcaat 727

<210> 27  
 <211> 562  
 <212> DNA  
 <213> *Gossypium hirsutum*

<220>  
 <221> misc\_feature  
 <222> (26)..(26)  
 <223> n = unknown

<400> 27  
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 ttcatgggtg attttgggtgc gtgtctgtta agaatccgag ttgttgtccc gtggtattag 180  
 cttctctgtc ttgctgggtg cgattgggca gttgtgacgt ctataatcaa gtgattcaag 240  
 gaaaccgtta gcttcatttt acttggagaa gacaaagaag ctattgttgt gctggacttg 300  
 ttcttgcttt ttctctttgt atgggtgtgg ttatggtttg tattatgagt tttatatgaa 360  
 tagaactttg aatttgggtga gaaaattaag aatgagcttg ggaggagcag aagtgttgat 420  
 ggcaatagca gggttgtggg cagtgggtttt gaggccattg atgataaggt atgccgtaga 480  
 gatgagtcaa atgattggaa tttccgttag gagatttttc agtaatcctc tttccccttc 540  
 cgtatcgttt ttttattggt ac 562

<210> 28  
 <211> 835  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 28  
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 agtcaagggg atggaacgag cacagcagct ttgagcactg cacttttcaa caatggcttg 120  
 agctgcggtg cctgctacga gctccggtgc aacaatgata ctcaatgggtg cattagtcca 180  
 accataaccg tgacagccac caacttttgt ccacctaaact atgctttatc tagtgacaat 240  
 ggcgggtggt gcaatccccc acgagaacac tttgatttgg ccgaaccggc attcttgcgg 300

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atagcagaat atcgagctgg aatcgtcctt gttatgttca gaagggtgtc atgtgtgaag 360  
 aaaggaggca tcaggtacac catgaatgga cattcgtact tcaacatggt gttgataacg 420  
 aacgtgggag gggcagggga tataacgtca gtgtccatca agggttccag aacaggatgg 480  
 ctacctatgt ccagaaattg gggccaaaac tggcagagca atgcttacct taacggacaa 540  
 agcctctctt ttaaagtgac tgccagcgat ggcaggacta tcacagccta caatgtagtg 600  
 cctgctgggt ggcaattcgg acaaactttt gaaggaggcc agttttaaga caatattata 660  
 gtgtctgtct aatataaaac tggaattgac atattactta tataaggcac atgagcggtt 720  
 tatgccgagg tagcaaaatg gcgcccgctg gctttatgtg tgaaataggc gagcaagtgc 780  
 cattagccta taatctatac atttcttata gtgaacaaaa ctattaagtt tgaac 835

<210> 29  
 <211> 765  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 29  
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 agctgcggtg cctgctacga gctccggtgc aacaatgatc ctcaatggtg cattagtcga 180  
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 aaaggaggca tcaggtacac catgaatgga cattcgtact tcaacatggt gttgataacg 420  
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 ctacctatgt ccagaaattg gggccaaaac tggcagagca atgcttacct taacggacaa 540  
 agcctctctt ttaaagtgac tgccagcgat ggcaggacta tcacagccta caatgtagtg 600  
 cctgctgggt ggcaattcgg acaaactttt gaaggaggcc agttttaaga caatattata 660  
 gtgtctgtct aatataaaac tggaattgac atattactta tataaggcac atgagcggtt 720  
 tatgccgagg tagcaaaatg gcgcccgctg gctttatgtg tgaaa 765

<210> 30  
 <211> 985  
 <212> DNA  
 <213> *Gossypium hirsutum*

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<400> 30  
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 gatgacagct gggatatttca gattgctgcc agatctccct aagatattct ggcgttaccc 180  
 tgtttcatat atcaactatg gtgcatgggc attgcaggga gcatacaaga atgatatggc 240  
 tgggcttgag tttgatggct tcatacctgg tgggtccaaa ctgaaagggtg atgtcgtcct 300  
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 aatgattttg atagcttata gattactttt cttcatcatt ctcaagttca aggagagagt 420  
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 aatgctctta ctggaatttg attacagaaa caaagggaag gagattatag tagaattaca 660  
 tatggaatta cctgtatcag ctttattttt caagtgttc taatatctgc ggactgttct 720  
 ggcattaatg gcaagagagt ttcccatcac ccaagaatgg tttgtttatg gtcctcccta 780  
 gcaatggcga tgaagagcag aaacctgatt tctgttgttg caaccagtgc tttgaagtaa 840  
 ccagatatga taaacaggta cagaaaatat ccattgttc ttcgtagata atttcatctg 900  
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 ttatatattgt acgtaaaaaa aaaaa 985

<210> 31  
 <211> 571  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 31  
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 tgggcttgag tttgatggct tcatacctgg tgggtccaaa ctgaaagggtg atgtcgtcct 300  
 cacatccatg ctaggcatcc atctggatca ttcaaagtgg tgggacttag cagctgttat 360  
 aatgattttg atagcttata gattactttt cttcatcatt ctcaagttca aggagagagt 420

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gtcaccattg tttcgaactc tttatacatg gcgaacattg cagcacatga aaaaacgacc 480  
 ttcttttagg aaaacatcag ccttcccatc caagaggcac caagttctac attcactgtc 540  
 ttctcaagag ggtctaaact ctccaattca c 571

<210> 32  
 <211> 2611  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 32  
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 gacccttctt gccacagga acgagatttt ggccttgctc tcaaggatcg agggcaaagg 120  
 aaaaggaatt ctgcaacacc atcaaattat tctagagttt gaagctatcc ctgaagagaa 180  
 cagaaagaag ctcgctgatg gtgcattttt tgaagtattg aaggctagtc aggaagcgat 240  
 cgtgttgctt ccatgggttg cacttgctgt tcgtccaagg cctgggtgtt gggagtacat 300  
 tagagtgaat gttcacgccc ttgttggtga ggaacttact gttgctgagt atctccactt 360  
 caaggaagag cttgttgatg gaagttcaaa tggaaacttt gttttggaat tggattttga 420  
 gcccttcaac tcatcattcc cccgccaac tctttcaaaa tccgttggtg atggtgtgga 480  
 gttcctaaat cgtcaccttt cggcaaaatt gttccatgac aaggagagca tgcacccttt 540  
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 acctcctgag acaccatgtg ccggattcga acaccggttc caggaaatcg gtttggaag 720  
 aggttggggg gacaccgcac aacgcgtgct cgagatgac caactccttt tggatcttct 780  
 tgaggcacct gatccttgca cccttgagaa gttccttggg agaatcccca tgggtgttcaa 840  
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 caccggtggc cagggtgttt acatcttgga tcaagtccga gctttggaga atgagatgct 960  
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 ctcaaagag ttgcaaggca agccagatct gatcatcgga aactacagt atggcaatat 1260  
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ggagaagaca aaatatcctg attcagatat ctactggaag aagcttgaag acaaatacca 1380
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cagtactttc caggaaattg caggaagcaa ggacactgtt ggtcaatacg agagccacac 1500
tgctttcact cttcctgggc tctaccgtgt tgtacatggg atcgatgtgt ttgatcccaa 1560
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gcgtgagttg gctaacctcg tagttgtagg tggatgtagg cgaaaggaat ctaaagattt 1860
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ttggagaata atattctggt ttgtaatttc aattggagaa gctcttttgt atttcatctt 2520
gtcttttcct tttccttttt tcgcggcat tgtttgaaca tggggttggt cgcccgtaa 2580
ttccagttaa atatggtgac ttttgttttt c 2611

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<210> 33
<211> 2415
<212> DNA
<213> Gossypium hirsutum

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<400> 33
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cttgcccaca ggaacgagat tttggccttg ctctcaagga tcgagggcaa aggaaaagga 120
attctgcaac accatcaaat tattctagag tttgaagcta tccctgaaga gaacagaaaag 180

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aagctcgctg atggtgcatt ttttgaagta ttgaaggcta gtcaggaagc gatcgtgttg	240
cctccatggg ttgcacttgc tgttcgtcca aggcctggtg tttgggagta cattagagtg	300
aatgttcacg cccttgttgt tgaggaactt actgttgctg agtatctcca cttcaaggaa	360
gagcttgttg atggaagttc aaatggaaac tttgttttgg aattggattt tgagcccttc	420
aactcatcat tccccgccc aactctttca aaatccgttg gtaatggtgt ggagttccta	480
aatcgtcacc tttcggcaaa attgttccat gacaaggaga gcatgcaccc tttgctcgaa	540
ttcctcagag tccattgcca caagggcaag aacatgatgt tgaatgacag aattcagaac	600
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aaggccgaaa tgaagaaaat gtttgagctg atcgagaagt acaacttgaa cggccaattc	1920

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agatggatat catctcaaat gaacagaatc cgaaatggtg aactttaccg atacatttgc 1980  
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 gaggcaatga cttgcggttt gccaacattc gcaacctgca acggtggacc agccgagatt 2100  
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 ccattggcag aggag 2415

<210> 34  
 <211> 732  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 34  
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 gtgatgactt gcttaagctt tgctcaagga aaagcagcgt cgccgtcgaa ggagtgttgt 180  
 aattcagtgg cggggattaa agagaataaa cccaaatgtt tgtgttatat tttgcaacaa 240  
 acacaaaactt ccggtgctca aaatctcaaa agcttaggtg ttcaagaaga taagctgttt 300  
 cagttaccgt cggcttgtca attgaagaac gctagcgtca gtgattgcc aaagcttctt 360  
 gggttatctc cgagctcacc agacgcgcgc atcttcacca actcctcctc taaagcaacg 420  
 acaccagta cttcaacaac caccgcaacg ccgtcttccg cggccgataa aaccgatagc 480  
 aaatccagtg gaatcaagct tgggtcccac ttcgtcggtt ccacggcggc gctactgggt 540  
 gctacagcgg ccgtgttttt ccttgtattc ccagctggat ttgcttcaat agtttagggg 600  
 ttttgcatgg gatctcgaga tttggagggt tatttattgt tgaagtccat ttgtttttaa 660  
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 ctttttctta tt 732

<210> 35  
 <211> 585  
 <212> DNA  
 <213> *Gossypium hirsutum*

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<400> 35  
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 gcggctgacg agagtgggtt agogaatgag tgcagcaaag atttccagag cgtgatgact 120  
 tgcttaagct ttgctcaagg aaaagcagcg tcgccgtcga aggagtgttg taattcagtg 180  
 gcgggggatta aagagaataa acccaaagt ttgtgttata ttttgcaaca aacacaaaact 240  
 tccggtgctc aaaatctcaa aagcttaggt gttcaagaag ataagctgtt tcagttaccg 300  
 tcggcttgct aattgaagaa cgctagcgtc agtgattgcc caaagcttct tgggttatct 360  
 ccgagctcac cagacgccgc catcttcacc aactcctcct ctaaagcaac gacaccagct 420  
 acttcaacaa ccaccgcaac gcggtcttcc gcggccgata aaaccgatag caaatccagt 480  
 ggaatcaagc ttgggtccca ctctgtcggg tcacagcgcg cgctactggg tgctacagcg 540  
 gccgtgtttt tccttgtatt ccagctgga tttgcttcaa tagtt 585

<210> 36  
 <211> 610  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 36  
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 cctccccgga ccgcaaaac gtgtgcaagt gcatcaaatc ggcggtgaac ggaattccgt 300  
 acaccagcaa taacctcaat ctgcgagcg gcctacctgc taaatgtggg ctccaactcc 360  
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 atggaaggag tggaagaagg ttccagctca gctagataaa gtagctagct aaggttaaat 480  
 aagctgtgtt ggtgtgttgt tttttagaaa attccatata taatcgggga aagaaaaaaa 540  
 aatagaaaat gtactttgta actgtatttc gtatgtgata tatataatgt atcgtaatct 600  
 ttaatttttt 610

<210> 37  
 <211> 369  
 <212> DNA  
 <213> *Gossypium hirsutum*

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<400> 37  
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 atcaaatcgg cggtgaacgg aattccgtac accagcaata acctcaatct cgcagccggc 300  
 ctacctgcta aatgtggtct ccaactccct tacagcatca gcccctccac tgactgcaac 360  
 aaggtgcag 369

<210> 38  
 <211> 886  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 38  
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 cacaggccta aaaccgatac cctcggttct actcccaagg atgccgctaa ccttagccac 180  
 atggctcaat gggagagtgc tcgggttagaa gctgaagcta gattggtgag agagtgcgaaa 240  
 cgagtttcaa acccttcgca aaaccaatth aggttcacgt cttcatcggc tcctccactg 300  
 gtaagcaaaa ttgatgttg tttgggtcat gctactaaac cgcaatgcct cgatgtactc 360  
 aaagcttggc aacgtgtagt cactggattg ttcactttca aactgacaa cctccaatct 420  
 ccaacatcga cgtcgagctt cacggaaaac acgttaccaa tctcatctgt cgggttcatt 480  
 gacagctttg tggggaactc aaataacagc tggtgcggaa ataattggga atgtgtggag 540  
 aaatcgagcc aagttgctga attacaggaa agattggata actcaatggg gttgcatgac 600  
 atattggatc tctcctcaga agatgtatgg tttcaaggct catacagggc ggaaaatatg 660  
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 tcaatggagc ctagacaaaa ctttaatggt ggaacaagta atgctagtag tttcgaagaa 780  
 aacaagaatt actggaacaa catccttaat tttgcgaatg cttccccttc tggttcttct 840  
 gtcttttgag attaattggt aagatttgaa ataaataaaa atatat 886

<210> 39  
 <211> 1353  
 <212> DNA  
 <213> *Gossypium hirsutum*

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<400> 39
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ctctcaccgg agcaatattg gagctataag ctgccaata ctccaatgcc aaaggctgtc      180
aaagaaattc tacatccaga actgatggag gagaaaagta cctctgtaaa tgtaggaggt      240
ggtggtgtaa acgtcaacac aggaaaaggg aagccagcgg gtggcactca tgtgaacggt      300
gggcgcaaag gagttggagt gaacacggga aagccagggg gtggcactca tgtgaatggt      360
ggaggcaaag gagttggggt gaacactgga aagccaggag gtggcaccca tgtgaacggt      420
ggaggcaaag gtggaggagt atctgtacac accggacaca agggaaagcc agtaaatggt      480
aatgtgagtc cgtttcttta ccaatatgca gccagtgaat ctcaaataca tgacgatccg      540
aatgtggctc ttttctttct ggaaaaggat ttacaccccg ggcaacaatg agcctgcatt      600
tcacttgaaa atacagagaa atccctttct taccttatca aactgccaaa aaaatccggt      660
ttcatctacg aagttgccag aattttcaca agttttcagt gaacctggat cagtgaaggc      720
agagatgatg aagaacccat taaggagtgc gaacagccag cgattgaagg agaggaaaaa      780
tattgtgcac cctcactgga gtcaatgatt gactacagca tttccaaact agggaaagtt      840
gatcaggcag tctcaacaga agtggaaaaa caaaccccaa cgcacaagta tacaataaca      900
gctggagtgc agaagatgac aaatgacaaa gctgtagtgt gccacaagca gaattatgca      960
tatgctgtct tctattgcca taaatgagaa acaacaaggg cttacatggg tccttttagag     1020
ggtgctgacg gaacaaaagc caaagcagta gcagtctgtc acacagatac atcagcatgg     1080
aaccctaaagc atttggcttt tcaagtcta aaagttgagc caggaaccat tcctgtctgc     1140
catttccttc ctgggatca cattgtttgg gtccccaagt aaaagtcctg aagagtagac     1200
tcatacacta tagtttcata ataggggtgca ttaaacagc ttaaagcaat ctccagtttg     1260
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<210> 40
<211> 1122
<212> DNA
<213> Gossypium hirsutum

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<400> 40
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gctctctcac ccgagcaata ttggagctat aagctgccaa atactccaat gccaaaggct 120
gtcaaagaaa ttctacatcc agaactgatg gaggagaaaa gtacctctgt aaatgtagga 180
gggtggtggtg taaacgtcaa cacaggaaaa gggaagccag cgggtggcac tcatgtgaac 240
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gttttcatatt acgaagttgc cagaattttc acaagttttc agtgaacctg gatcagtga 660
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aaatattgtg caccctcact ggagtcaatg attgactaca gcatttccaa actagggaaa 780
gttgatcagg cagtctcaac agaagtggaa aaacaaaccc caacgcacaa gtatacaata 840
acagctggag tgcagaagat gacaaatgac aaagctgtag tgtgccacaa gcagaattat 900
gcatatgctg tcttctattg ccataaatga gaaacaacaa gggcttacat ggttccttta 960
gaggggtgctg acggaacaaa agccaaagca gtagcagtct gtcacacaga tacatcagca 1020
tggaacccaa agcatttggc ttttcaagtc ctaaaagttg agccaggaac cattcctgtc 1080
tgccatttcc ttcctcgga tcacattgtt tgggtcccca ag 1122

```

```

<210> 41
<211> 1373
<212> DNA
<213> Gossypium hirsutum

```

```

<220>
<221> misc_feature
<222> (895)..(895)
<223> n = unknown

```

```

<220>
<221> misc_feature
<222> (911)..(911)
<223> n = unknown

```

```

<220>
<221> misc_feature
<222> (1270)..(1270)

```

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&lt;223&gt; n = unknown

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1336)..(1336)

&lt;223&gt; n = unknown

&lt;400&gt; 41

tgctctcaga atcaaaggaa atgggtttttc aattcaattt tccagttctt ctattatgtc	60
ttatgttttt aatgtgtggc agaggcaatg cagtaaggga tttggaaggg aaacatgatt	120
ttgaaagcca tggcagagac gacgaagtgg agagttaga tgacaagtac gttagcgctt	180
actttcatca aacttttgat tctgcaaatc actttgatgg aggtgatgaa gtgaagaatt	240
tagaagacaa atattcaacg gcttacttcc acaaatcggt agattctgga aaccatggca	300
gagatgacaa agcaaagata ttggaagaca agtatgctac tgcgtacttc cacaagactt	360
ctgtttttga aaaccatggt gaagggtgaca aattaaagag tttggaagat aaatattccg	420
cggcttactt tcacaacaca caatcttcca aaatgatgaa ggatcacaaac atggaacatc	480
accaccatta ccataaccat gttgaaagtg cagagatagg cttgttcacc attgatgaac	540
tacatacctt taacgtaggg aagaaattac ccattctttt cccaataaaa aaccactctc	600
tttaccctcc tttattgcct aaacaaattg ctgacaccat ccctttttca tctttccaag	660
tttctaatat tctacgattc ttctcagttt ctccggactc ccccaaaggc aaaagctggt	720
caagatacct tcgcaaaatg cgaactcgga gcagcgcaag ggggagaccc aaaatctggg	780
ctacctcttt aaaatcttta catgggtttc taagcatgca tttgggcccc atgttgatgt	840
caagttcata agccaaggca tccccccata ccaaccccac tctttcaaag ttacncagtt	900
ttagaatccc ntgaagagat tgaatctcca aagaaagtag catgtcatcc aatgccatat	960
ctttatgcag tttatttctg tcactttgat gccactgaga ttaaagcttt caaactccgt	1020
ttagttggtg atgttacggg agataagggtg gatgctgttg ttctttgcca tatggatact	1080
tcaggttgga gctctgatca tgctgctttt cgcattgctt gtattaagca aggaaacact	1140
gtttgccatg tattttctca aggtaatctt gtttggtatta atcagccatc ggatatcgct	1200
gccggtgcca tataagtgtt gaactgttcg atgtagcact catttgccac tacgtatcga	1260
gaccttatcn caatataagt atttaagagc tagtcttatg ttacttaggt ttcattggtg	1320
ttcgttaatg gtgtgncttt ctatctatat taagtatcaa gtaattaagc aat	1373



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<210> 42  
 <211> 1212  
 <212> DNA  
 <213> *Gossypium hirsutum*

<220>  
 <221> misc\_feature  
 <222> (895)..(895)  
 <223> n = unknown

<220>  
 <221> misc\_feature  
 <222> (911)..(911)  
 <223> n = unknown

<400> 42  
 tgctctcaga atcaaaggaa atggtttttc aattcaattt tccagttctt ctattatgtc 60  
 ttatgttttt aatgtgtggc agaggcaatg cagtaaggga tttggaaggg aaacatgatt 120  
 ttgaaagcca tggcagagac gacgaagtgg agagttaga tgacaagtac gtttagcgctt 180  
 actttcatca aacttttgat tctgcaaatc actttgatgg aggtgatgaa gtgaagaatt 240  
 tagaagacaa atattcaacg gottacttcc acaaatcggt agattctgga aaccatggca 300  
 gagatgacaa agcaaagata ttggaagaca agtatgctac tgcgtacttc cacaagactt 360  
 ctgtttttga aaaccatggt gaagggtgaca aattaaagag tttggaagat aaatattccg 420  
 cggcttactt tcacaacaca caatcttcca aaatgatgaa ggatcacaac atggaacatc 480  
 accaccatta ccataacat gttgaaagtg cagagatagg cttgttcacc attgatgaac 540  
 tacatacctt taacgtaggg aagaaattac ccattctttt cccaataaaa aaccactctc 600  
 tttaccctcc tttattgcct aaacaaattg ctgacacat ccctttttca tctttccaag 660  
 tttctaatat tctacgattc ttctcagttt ctccggactc ccccaaaggc aaaagctggt 720  
 caagatacct tcgcaaatg cgaactcgga gcagcgcaag ggggagaccc aaaatctggg 780  
 ctacctcttt aaaatcttta catgggtttc taagcatgca tttgggcccc atgttgattt 840  
 caagttcata agccaaggca tcccccata ccaacccac tctttcaaag ttacncagtt 900  
 ttagaatccc ntgaagagat tgaatctcca aagaaagtag catgtcatcc aatgccatat 960  
 ctttatgcag tttatttctg tcactttgat gccactgaga ttaaagcttt caaactccgt 1020  
 ttagttgggtg atgttacggg agataagggtg gatgctgttg ttctttgcca tatggatact 1080  
 tcaggttgga gctctgatca tgtcgtttt cgcagtgttg gtattaagca aggaaacact 1140  
 gtttgccatg tattttctca aggtaatctt gtttggatta atcagccatc ggatatcgct 1200

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gccggtgcca ta 1212

<210> 43  
 <211> 1024  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 43  
 gtataacaga ggcagaatcg accggcataa aaataaaaat gggaggctgg gcaatcgcag 60  
 tgcattggtgg tgctggtggt caccctaatc tccctagtga aaggcaagag gaagctgtgc 120  
 tactcctcaa tcgttgccct gatattggaa tctgtgcttt ttgttctaac ctttcgggca 180  
 ttgactgaca tgaacttgta ttgagggaat ttgaacggat cctttgctta attccgggag 240  
 tggatcggca cttacggata aagggacgga ggaaatggaa acttgcttta tggatggacc 300  
 gaacagacca tgcggtgctg tttcgggtaa acgacatgga agaatccgat atctcttgct 360  
 cgacttgaaa tggataaaac accacattca tctttgggtt ttgccggcgc cgattatatt 420  
 gcgaggaaac aggggtgtgga gttggtggac aatgaatatt tcattacaga atacaatgtg 480  
 gggatgctta agttaacaaa agaagcacac tcaatcctgt actattaccg taccctaacc 540  
 ctcaccacct gcggaggcag cgcagacatg gaaaatcgat tacgaatgaa ctggttacca 600  
 atctttctct acatcatata aacagtgggt cgagtgcac catacaaaca atgtcattgc 660  
 tctgccgcta cttgcaccgg tggattaatg aacattatga ccggaagat tggtgactcg 720  
 ccgctgattg gttcagagac ttatgcttgt gacttattgg ctgtttatgt accggtgaat 780  
 gtgaagccat tatgctaagc actttggcta cggaagtagc agcgtgatgg aatataaatg 840  
 gttgaatctt cctgaagctg tggatatgtg attaaactag actatgtgaa ggcaaagctg 900  
 gtctattgcc tgcctatat gggaagtgtg tggggctgaa tactactggt atgatatggt 960  
 tggctactga agatggatta tggaagtgtg tgtctgcaaa ttgatgttag cttagatgct 1020  
 ggtc 1024

<210> 44  
 <211> 795  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 44  
 gtataacaga ggcagaatcg accggcataa aaataaaaat gggaggctgg gcaatcgcag 60  
 tgcattggtgg tgctggtggt caccctaatc tccctagtga aaggcaagag gaagctgtgc 120

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tactcctcaa tcgttgcoctt gatattggaa tctgtgcttt ttgttctaac ctttccggca 180  
 ttgactgaca tgaacttgta ttgagggaat ttgaacggat cctttgctta attccgggcg 240  
 tggatcggca cttacggata aagggacgga ggaaatggaa acttgcttta tggatggacc 300  
 gaacagacca tgcggtgctg tttcgggtaa acgacatgga agaatccgat atctcttgct 360  
 cgacttgaaa tggataaaac accacattca tctttgggtt ttgccggcgc cgattatttt 420  
 gcgaggaaac aggggtgtgga gttggtggac aatgaatatt tcattacaga atacaatgtg 480  
 gggatgctta agttaacaaa agaagcacac tcaatcctgt actattaccg tatcctaacc 540  
 ctcaccacct gcggaggcag cgcagacatg gaaaatcgat tacgaatgaa ctggttacca 600  
 atctttctct acatcatata aacagtgggt cgagtcgcac catacaaaca atgtcattgc 660  
 tctgccgcta cttgcaccgg tggattaatg aacattatga ccggaaagat tgggtgactcg 720  
 ccgctgattg gttcagagac ttatgcttgt gacttattgg ctgtttatgt accggtgaat 780  
 gtgaagccat tatgc 795

<210> 45  
 <211> 989  
 <212> DNA  
 <213> *Gossypium hirsutum*

<400> 45  
 accatacact ccaagacccc aaccattaac cgcacaagaa gaatcggatc ttgaattggc 60  
 acaccaaaga ctgttaaaac tttgccaaaa tgcgcgcagt acaacgttcc ttttaaccatt 120  
 gatgccgagg acacgtcgat tcaacccgcc atcgattact tcacgtaact tcggccatca 180  
 tgtatacaaa gatgataacc ccattgtcta cggcacgatg caagcttact tgaaagacgc 240  
 gagggagcgg ctgtttaaca cggcgaggac ggcggagaag ctggggattc atatgggggtt 300  
 taagctggtg agaggcgctt acatgtcgag cgaaaccaag ttggcttctt ccttaggggtt 360  
 cgattcgccg gttcacaaca ccattcaaga caccatgct tgtttcaatg attgtgcttc 420  
 gtttatgatt gagaagattg ctgatgggta tggcggactc gttctcgcaa ctcataatct 480  
 tgagtcaggg aaattggcag catcgaaagc acgaaattta ggaattgaga aggggaatca 540  
 aaagcttgaa tttgcacagt tatatggaat gtcggaagcg ctgtcgattg gattgagaaa 600  
 cgcagggttt caagttagca aatacttacc ctatggacca gttgatatgg taatgccata 660  
 ccttttaagg agagccgaag aaaatagagg actottatca acttcaagcc ttgatagaac 720  
 tctcatgggg aaggagttga agagaagatt aaagagcctg caatttgcca agccagagat 780

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ggcagcttca gcagcaggta gcatgaagat agaaatagga acgccataaa tgagggttttg      840
attcatagat ggtttgggat gggcaatttt tgccaacaat gtagaattat gaaaaaaaaa      900
taacaatcat tgtaacgttt gggcatttgt cccatgtcaa ttattatttg cattagaaat      960
tgaatttttt tctttatttt tgaaaaaaaaa      989

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```

<210> 46
<211> 410
<212> DNA
<213> Gossypium arboreum

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```

<400> 46
atcaaggctg ccgtaatgtg caataatgct tgaccaaaga tgatataaaa aaagggaaaa      60
gagaagaaaa ggtgttcgtc cgaaaacaaa tttaacgatt aaagaagtca agagcgcacc      120
tttcaattca tcctttgcgg tcatgggtgtt ttgtaagaag gcaaaatcac caagcctgca      180
aggatagtag gttcgggaat tgactttgcc aaagagattt taatattaga tatgttgga      240
gaactcccca ttttgtgtag gctaagagtt caatgtagga gtggacttta tactagtcta      300
atttcttttc agtttcatgt gttattgttg aagcattagt ttttttgac ttattcctcc      360
attaacaaac atttgtaat ttctgcttaa aaaaaaaaaa aaaaaaaaaa      410

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```

<210> 47
<211> 665
<212> DNA
<213> Gossypium arboreum

```

```

<220>
<221> misc_feature
<222> (19)..(19)
<223> n = unknown

```

```

<220>
<221> misc_feature
<222> (112)..(112)
<223> n = unknown

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```

<400> 47
attacaccct tttcatttnt agatcacatc ataagaagac tgggggttgaa aaaccccacc      60
tcccatggga gtttcttaag cgatgtgagc gtctcctcct ctgtgtaatc tntgattcaa      120
gatccatcca ttatcttccc tctgtattgg ctactgcaac catgatgcac gtcataagacc      180
aagttgagct tttcaatccc attgactacc aaaatcagct gctgagtgtt cttaaaatta      240
gcaaggaaaa agtaaacgat tgttacaagc tcatccttga tgtatcaaca agaccccagg      300

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cccaaggcaa tggtggtgca tgtaagagga aggtggagga gagggttcct agcagcccta 360
gtggagtgat tgatgctgca tttggcagtg atagctcgaa cgattcgtgg ggcacgggtgt 420
ccttatcgcc tgagcagcag ccacctttta agaagagcag agcccaagag caagtaatgc 480
gtttgccatc actcaaccga gtctttgtag acattgttgg cagcccttct taattatata 540
tcccttctct ctctccctcg ctctctccat ctctttcttt gtcccaaaaa gatctatatt 600
tattatgott atgttcactt ttggttcaag gaatcaaag ttaagttaaa aaaaaaaaaa 660
aaaaa 665

```

```

<210> 48
<211> 626
<212> DNA
<213> Gossypium hirsutum

```

```

<220>
<221> misc_feature
<222> (581)..(581)
<223> n = unknown

```

```

<400> 48
cttgtttcta tctgtatata accaaggga ttagacaccc gttcagttga aagagttcag 60
ctgaacaccc caaagatggc caaccacacc gttaccttct tccctaaact atccattgaa 120
gctattcaga cagtgcactcc gatgaggata actgaaccac gacagactcg acaagtattg 180
gcagggggagc ttgtaggacc cgggattttc caaagggtgt tgaacgtggc ccagtactac 240
atgaaggaga aagaagaaga ctctggttgg ttactggctg ggtggatcaa ggaaacactt 300
gggagagctt tacatgagca accaatgatt tctggtcgtc ttcggaaagg ggaacgaaac 360
gatggagaat tggagattgt ttccaatgac tgcggcatta gactcattga ggcaaggatt 420
cagatgaatc tgtcggattt tcttgatttg aaacaaaggg aagatgctga agctcagctt 480
gttttctgga aagatattga tgagcaaac ccacagttct cccactctt ttatgttcag 540
gttactaatt tccagtgtgg tggatattca attgggatta nctgcagtat tcttctggca 600
gatcttttgt taatgaaaga attcct 626

```

```

<210> 49
<211> 644
<212> DNA
<213> Gossypium arboreum

```

```

<220>

```

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<221> misc\_feature  
 <222> (585)..(585)  
 <223> n = unknown

<400> 49  
 actgagttaa gagtttcaat tcttctactt attatagtta aatatcatat atggccaagt 60  
 acttgaatgt tgtgcttggt cttgctctag tagtggttca agctactgca aggaatgtgc 120  
 ctagcgatgc tgctgggtctc aatgaccaaa agaacctcct cacatacggg ggcattggcg 180  
 gctactctgg catgggttca aatggcatgc caatgggtgg agttgggagt gttggtggta 240  
 tgactggcct tgggtggtaca ggtgggatgg gcgccatggg aggtggtggg tatggagggtg 300  
 ggcctggcgc tgggtggtgga aatgaaggtg gtgttggcat tggcaatgcg cctgggtgtcg 360  
 tccactttcc ttgaactttg ctggatgggt aaaattttta agcaactagt ttcttgaact 420  
 ttgctggagg ggtttaaatt ttaaagcaac tagtctaact tacgttaaag agtaatatta 480  
 aagttgctct agagtgtgaa atgttttggg ttatgtgata ggtccatctt tatttttttt 540  
 atgtcgagtt ttcttttggt ttgtaatcct tcattgtcgt ggttntgtag ccgacttaaa 600  
 gtaaataaat tgattttgac aagttaaaaa aaaaaaaaaa acaa 644

<210> 50  
 <211> 677  
 <212> DNA  
 <213> *Gossypium arboreum*

<400> 50  
 gacactcaaa tataagtagc aaactaacct atgggttatt tggctgattt tgaagggttc 60  
 atgggtgtatt ttggtgctg tctggtgaga atccgagttg ttgtcccgtg gtattagctt 120  
 ctctgtcttg ctggttgca ttgggcagtt gtgagggtcta taatcaagtg attcaaggaa 180  
 accgttagct tcattttact tggagaagac aaagaagcta ttgttgtgct ggacttgttc 240  
 ttgctttttc tctttgtatg gtgtgggtta tggtttgat tatgagtttt atatgaatag 300  
 aactttgaat ttggtgagaa aattaagaat gagcttggga ggagcagaag tgttgatggc 360  
 aatagcaggg ttgtgggcag tggttttgag gccattgatg ataaggtatg ccgtagagat 420  
 gagtcaaagt attggaattt ccgttaggag agttttcagt aatcctcttt ccccttccgt 480  
 atcgtttttt tattggtact gatatagaaa ttctatgaaa tgagcacaat atgagacacc 540  
 attttttgct agccaagaag ttagatgagt ggttagacttt ggtttaagct tatcataatt 600  
 gaaattgtta gactgtaacc cttttgtctc ctttctctaa tttcaaattc aaattcccat 660

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caataaaaaa aaaaaaa

677

<210> 51  
 <211> 692  
 <212> DNA  
 <213> *Gossypium arboreum*

<400> 51  
 ccctacattt ttacgctctg gcacagaaga agaaagccct acctatataa tattacatgc 60  
 aaatataatg gtatcattag acgttatgac atcgtataat gtaggaggca tctgctacta 120  
 acatttggca gatgaaatta ttacgaaga acaatgggat attttctgta tttgtttatc 180  
 atatctgggtt acttcaaagc actgggttgca acaacagaaa tcaggtttct gctcttcatt 240  
 gccattgcta gggaggacca taaacaaacc attcttggga gatgggaaac cctcttgcca 300  
 ttaatgccag aacagtttgc agatattaga agcacttgaa aaataaagct gatacagata 360  
 attccatatg taattctact ataatctctt tctctttgtt tctgtaatca aattccagta 420  
 agagcattac tatagtactc atgatttggt gattcttcta gtgaattgga gagtttagac 480  
 cctcttgaga agacagttaa tgtagaactt ggtgcctctt ggatgggaag gctgatgttt 540  
 tcttaaaaga aggtcgtttt ttcatgtgct gcaatgttcg ccatgtataa agagttcgaa 600  
 acaatgggtga gactctctcc ttgaacttga gaatgatgaa gaaaagtaat ctgtaagcta 660  
 tcaaaatcat tataacagct gctaagtccc ac 692

<210> 52  
 <211> 788  
 <212> DNA  
 <213> *Gossypium arboreum*

<400> 52  
 aagatgatga aaaggggttt tattgttttg gccttgatgg tggttttcgc cgcgacggtg 60  
 gttacggggg ctgacgagag tgggttagcg aatgagtgca gcaaagattt ccagagcgtg 120  
 atgacttgct taagctttgc tcaaggaaaa gcagcgctgc cgtcgaagga gtgttgtaat 180  
 tcagtggcgg ggattaaaga gaataaacc aaatgtttgt gttatatattt gcaacaaaca 240  
 caaacttccg gtgctcaaaa tctcaaaagc ttaggtgttc aagaagataa gctgtttcag 300  
 ttaccgtcgg cttgtcaatt gaagaacgct agcgtcagtg attgccc aaa gcttcttggg 360  
 ttatctcoga gctcaccaga cgccgccatc ttcaccaact cctcctctaa agcaacgaca 420  
 ccagtagctt caacaaccac cgcaacgccc tcttccgagg ccgataaaac cgatagcaaa 480  
 tccagtggaa tcaagcttgg tccccacttc gtcgggtcca cggcggcgct actggttgct 540

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```

acagcggccg tgtttttcct tgtattocca gctggatttg cttcaatagt ttaggggttc      600
tgcattgggat ttcgagattt ggaggtttat ttattgttga agtccatttg tttttaaacg      660
gtctcagaaa aaaaatggac tgagttgaca attatgatga tttttcgctt attcttgctt      720
tttcttattt gattaaacgt ccctttgaaa taaaacttag tttattttcc cagctttccc      780
cctgggaa                                         788

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```

<210> 53
<211> 634
<212> DNA
<213> Gossypium arboreum

```

```

<400> 53
caaacactag tagaaggttt agttttacaa acatggctag ttccggtgtc ctttaagttgg      60
tttccatgat tctcatcgtg tgcattgacgg tgattgagtgc acccaaggca gccaaagccg      120
ccatcacgtg cagcgacgtg gtgaaccact tgatcccgtg cttgtcctac gtacaaaacg      180
gcggtacacc cgctgctgca tgctgcagtg gggtaaaagc actctacggc gaggctcaga      240
cctccccgga ccgccaaaac gtgtgcaagt gcatcaaadc ggcggtgaac ggaattccgt      300
acaccagcaa taacctcaat ctgcgagccg gcctacctgc taaatgtggt ctccaactcc      360
cttacagcat cagccccctc actgactgca acaagggtgca gtgaggttga tgatgatgat      420
atggaagaag gagggtgaag aggttccagc tcagctagat aaagtagcta gctaaggtta      480
aataagctgt gttgggtgtg tgttttttag aaaattccat atataatcgg ggaaagaaaa      540
aaaaaataga aaatgtactt tgtaactgta tttcgtatgt gatatatata atgtatcgta      600
atctttaatt ttttaaaaaa aaaaaaaaaa aaaa                                         634

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```

<210> 54
<211> 884
<212> DNA
<213> Gossypium arboreum

```

```

<400> 54
cagtgaact caaatccatg aagaccgaa tgtggctctt ttctttcttg aaaaggatat      60
gcaccccggg gcaacaatga gcctacattt cactgaaaat acagagaaat cagctttctt      120
accttatcaa actgccccaa aaataccgtt ttcattctgac aagttgccag aaattttcaa      180
caagttttca gtgaaacctg gatcactgaa ggcagagatg atgaagaaca caattaagga      240
gtgcgaacag ccagcgattg aaggagagga aaaatattgt gcaacctcac tggagtcaat      300

```



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gattgactat agcattttcca aactagggaa agttgatcag gcagtctcaa cagaagtgga 360  
 aaaacaaacc ccaacgcagc agtatacaat aacagctgga gtgcagaaga tgacaaatgg 420  
 caaagctgta gtgtgccaca agcagaatta tgcataatgct gtctttctatt gtcataaatc 480  
 agaaacaaca agggcttaca tggttccttt agagggtgct gacggaacaa aagccaaagc 540  
 agtagcagtc tgccacacag atacatcagc atggaaccca aagcatttgg cttttcaagt 600  
 cctaaaagtt gagccaggaa ccattcctgt ctgccatttc cttcctcggg atcacattgt 660  
 ttgggtccct aagtaaaagt cctgaagagt agattcatac actatagttt cttcacagtg 720  
 tgcattaaaa cagcttaaag caatatccag tttgttctat aataatatac ccacaagttt 780  
 agtcatgtaa aatctatcca tgaatcatgt tcttagtaat ggataaaatg atattacttt 840  
 ctgtatcaca agggtttggg gataaatgta ttagtatttt aagt 884

<210> 55  
 <211> 690  
 <212> DNA  
 <213> *Gossypium arboreum*

<400> 55  
 ggagtgctct cagaatcaaa ggaaatgggt tttcaattca attttccagt tcttctatta 60  
 tgtottatgt ttttaatgtg tggcagaggc aatgcagtaa gggatttgga agggaaacat 120  
 gattttgaaa gccatggcag agacgacgaa gtggagagtt tagatgacaa gtacgttagc 180  
 gcttactttc atcaaacttt tgattctgca aatcactttg atggagggtga tgaagtgaag 240  
 aatttagaag acaaatatc aacggcttac ttccacaaat cgtagattc tggaaaccat 300  
 ggaagagatg acaaagcaaa gatattggaa gacaagtatg ctactgcgta cttccacaag 360  
 acttctgttt ttgaaaacca tgggtgaagg gacaaattaa agagtttgga agataaatat 420  
 tccgoggctt actttcacia cacacaatct tccaaaatga tgaaggatca caacatggaa 480  
 catcaccacc attaccataa ccattgtgaa agtgcagaga taggcttgtt caccattgat 540  
 gaactacata cctttaacgt agggaagaaa ttacccatct ttttcccaat aaaaaaccac 600  
 tctctttacc ctcttttatt gcctaaacaa attgctgaca ccatcccttt ttcattctcc 660  
 caagtttcta atattctacg attcttctca 690

<210> 56  
 <211> 653  
 <212> DNA  
 <213> *Gossypium arboreum*

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<400> 56  
 ggcacgagca gaatgaccgg cagagaataa aatgggaggc tgggcaatcg cagtgcattgg 60  
 tgggtgctggg gtagacccaa atctccctaa tgaaaggcaa gaggaagcta aaagactcct 120  
 cactcggttg cttgatattg gaatctctgc tcttcgttct aacctctccg ccattgacgt 180  
 cggtgaactt gtcgtgaggg aattggaaac ggatcctttg ttttaattccg ggcgtggatc 240  
 agcacttacg gagaaagggg cgggtggaaat ggaagctagt attatggatg gaccgaagag 300  
 acgatgcggg gctgtttcgg gtttaacgac ggtgaagaat ccgatatctc ttgctcgact 360  
 tgttatggat aaaacaccac attcgtatctt gggttttgcc ggcgccgaag agtttgcgag 420  
 gaaacagggg gtggagttgg tggacaatga atatttcatt acagaagaca atgtggggat 480  
 gcttaagtta gcaaaagaag caaactcaat cctgttcgat taccgtatcc caaccctcac 540  
 cacctgcggg ggcggcgag ccattggaaa tcaattacaa atgaacgggt taccaatcag 600  
 tctctacgcc ccagaaacag taggctgcgt ttagttgac aaacaggtca ttg 653

<210> 57  
 <211> 612  
 <212> DNA  
 <213> *Gossypium arboreum*

<400> 57  
 tttttttttt tttttcataa ttctacattg ttggcaaaaa ttgccatcc caaaccatct 60  
 atgaatcaaa acctactta tggggtgcct atttctatct tcatgctacc tgctgctgta 120  
 gctgccatct ctggcttcgc aaattgcagg ctctttaatc ttctcttcaa ctccctcccc 180  
 atgagaggtc tatcaaggct tgaagttgat aagagtcctc tattttcttc ggctctcctt 240  
 aaaaggatat gcattacat atcaactggg ccatagggtg agtatttgct aacttgaaac 300  
 cctgcgtttc tcaatccaaa cgacagcgtc tcgacattc catataactg tgcaaattca 360  
 agcttttgat tccccttctc aattcctaaa tttcgtgctt tcgatgctgc caatttcctt 420  
 gactcaagat tatgagttgc cagaatgagt ccgccatacc catcagcaat cttctcaatc 480  
 ataaacgaag cacaatcatt gaaacaagca tgggtgtctt gaatgggtgt gtgaaccggc 540  
 gaatogaacc ctaaggaaga agccaacttg gtttcgctcg acatgtaagc gcctctcacc 600  
 agcttaaacg cc 612

<210> 58  
 <211> 3  
 <212> RNA  
 <213> Artificial Sequence

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<220>  
<223> Stem loop structure of dsRNA  
  
<400> 58  
ccc 3

<210> 59  
<211> 4  
<212> RNA  
<213> Artificial Sequence  
  
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<223> Stem loop structure of dsRNA  
  
<400> 59  
uucg 4

<210> 60  
<211> 5  
<212> RNA  
<213> Artificial Sequence  
  
<220>  
<223> Stem loop structure of dsRNA  
  
<400> 60  
ccacc 5

<210> 61  
<211> 6  
<212> RNA  
<213> Artificial Sequence  
  
<220>  
<223> Stem loop structure of dsRNA  
  
<400> 61  
cuggag 6

<210> 62  
<211> 6  
<212> RNA  
<213> Artificial Sequence  
  
<220>  
<223> Stem loop structure of dsRNA  
  
<400> 62  
aagcuu 6

<210> 63

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<211> 7  
<212> RNA  
<213> Artificial Sequence

<220>  
<223> Stem loop structure of dsRNA

<400> 63  
ccacacc

7

<210> 64  
<211> 9  
<212> RNA  
<213> Artificial Sequence

<220>  
<223> Stem loop structure of dsRNA

<400> 64  
uucaagaga

9

<210> 65  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer

<400> 65  
agaacatgat gtgtgctgc

19

<210> 66  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer

<400> 66  
agctgtgaac tgctcactc

19

<210> 67  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer

<400> 67  
tcaaaccctc ctcaaagcaa cc

22

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<210> 68  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer

<400> 68  
attccattac cagacgatga tgac 24

<210> 69  
<211> 17  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer

<400> 69  
gctttctctt ggatcag 17

<210> 70  
<211> 19  
<212> DNA  
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<220>  
<223> Oligonucleotide primer

<400> 70  
caataacaca tgaaaccag 19

<210> 71  
<211> 12  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer

<400> 71  
cccacgcgtc cg 12

<210> 72  
<211> 14  
<212> DNA  
<213> Artificial sequence

<220>  
<223> Oligonucleotide primer

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<400> 72  
aaaaaaagggc ggcc

14

<210> 73  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer

<400> 73  
caagacaagg aagcatccc ac

22

<210> 74  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Oligonucleotide primer

<400> 74  
tcggaactct ccacctccaa ag

22